PE NUMBER: 0604233F

PE TITLE: Specialized Undergraduate Pilot Training

	RDT&E BUDGET ITEM		DATE	Februar	y 2003						
	T ACTIVITY  System Development and Demons	tration (	SDD)		UMBER AND <b>14233F</b>		zed Und	ate Pilot	Training		
	COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	4,682	1,867	3,267	3,368	8,572	3,536	3,603	3,668	Continuing	TBD
4102	Joint Primary Aircraft Training System (JPATS)	1,802	1,867	1,897	1,948	7,123	2,046	2,075	2,102	Continuing	TBD
4376	T-38 Avionics Upgrade Program (AUP)	2,880	0	1,370	1,420	1,449	1,490	1,528	1,566	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	8

Note: The RDT&E test articles above include the JPATS test aircraft (T-1) funded with FY95 through FY01 funds and Ground Based Training System (GBTS) Aircrew Training Devices (ATD), conversion software, and Training Integration Management System (TIMS) components funded with FY97 through FY01 funds. It also includes two T-38C (AUP equipped) test aircraft and two ATDs.

### (U) A. Mission Description

Supports Air Education and Training Command's (AETC) implementation of Specialized Undergraduate Pilot Training (SUPT) and the Department of Defense initiative for joint pilot training. The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34 respectively) and associated Ground Based Training Systems (GBTS). The Air Force is the Executive Service. The T-38 AUP is an integrated modernization of the T-38A and AT-38B cockpits to support mission ready fighter and bomber training. Additionally, there are funds in this project for Phase I testing of propulsion enhancements for the T-38 aircraft and to update T-38 flight performance models, Technical Orders, and AUP software for both aircraft and Aircrew Training Devices for changes brought about by the T-38 Propulsion Modernization Program (PMP). T-38 FY02 and FY04 - FY09 funding is for software block updates driven by FAA-mandated changes, National Aerospace System (NAS) requirements, and enhancements identified during test and evaluation.

In FY2006, Project 4102 includes \$5.367 million for upgrade of the Simulator for Electronic Combat Technology (SECT). SECT is used to train electronic warfare officers in multi-place aircraft. Sustainment is out of OO-ALC/YW at Hill AFB, UT. SECT is not related to the JPATS program. The JPATS portion of the FY06 funds is \$1.756 million.

### (U) B. Budget Activity Justification

This program element is in Budget Activity 5, engineering and manufacturing development because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

Page 1 of 11 Pages

Exhibit R-2 (PE 0604233F)

	RDT&E BUDGET ITEM JUSTIFICATION	ON SHEET (R-2 Exhib	DATE <b>Febru</b> a	ary 2003	
=	SET ACTIVITY System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specializ	ed Undergrad	luate Pilot Trainii	ng
(U)	C. Program Change Summary (\$ in Thousands)				
		FY 2002	FY 2003	FY 2004	Total Cost
(U)	Previous President's Budget	4,885	1,909	1,941	348,229
(U)	Appropriated Value	4,885	1,909		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-48	-21		
	b. Small Business Innovative Research	-132	-21		
	c. Omnibus or Other Above Threshold Reprogram				
	d. Below Threshold Reprogram				
	e. Rescissions	-23			
(U)	Adjustments to Budget Years Since FY 2003 PBR			1,326	22,169
(U)	Current Budget Submit/FY 2004 PBR	4,682	1,867	3,267	TBD
	I	Page 2 of 11 Pages		Exhibit R-2	(PE 0604233F)

	RDT&E BUDGET ITEM	JUSTIF	ICATIO	N SHE	ET (R-	2A Exh	ibit)		DATE	Februar	y 2003
	ET ACTIVITY  System Development and Demons	PE NUMBER AND TITLE  0604233F Specialized Undergraduate Pil					Training	PROJECT 4102			
	COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4102	Joint Primary Aircraft Training System (JPATS)	1,802	1,867	1,897	1,948	7,123	2,046	2,075	2,102	Continuing	TBD

#### (U) A. Mission Description

The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34, respectively) and associated Ground Based Training Systems (GBTS). The aircraft and GBTS will be used to train entry-level student aviators in the fundamentals of flying so they can transition into advanced training tracks leading to qualification as military pilots, navigators, and naval flight officers. The program includes the purchase of aircraft, simulators, and other associated ground-based training devices, Training Integration Management System (TIMS), instructional courseware, and logistics support.

The FY2006 figure of \$7.123 million includes \$5.367 million for upgrade of the Simulator Electronic Combat Technology (SECT). SECT is used to train electronic warfare officers in multi-place aircraft and is managed at OO-ALC/YW at Hill AFB UT. The JPATS portion of the FY2006 funds is \$1.756 million for RDT&E.

Budget Activity Justification: This program element is in Budget Activity 5, Engineering and Manufacturing Development (EMD) because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

#### (U) FY 2002 (\$ in Thousands)

(U) \$1,802 Studies & development efforts.

(U) \$1,802 Total

#### (U) FY 2003 (\$ in Thousands)

(U) \$1,867 Studies & development efforts.

(U) \$1,867 Total

#### (U) FY 2004 (\$ in Thousands)

(U) \$1,897 Studies & development efforts.

(U) \$1,897 Total

#### (U) B. Project Change Summary

Not Applicable

Project 4102 Page 3 of 11 Pages Exhibit R-2A (PE 0604233F)

	RDT&E BUD	GET IT	EM JUS	TIFICAT	ION SH	EET (R-	2A Exhi	bit)		DATE <b>February</b>	2003
	ET ACTIVITY  System Development	and Dem	onstratio	n (SDD)		NUMBER AND <b>04233F</b>		ed Under	graduate	Pilot Training	PROJECT <b>4102</b>
( <b>U</b> )	C. Other Program Funding S	ummary (\$	in Thousand	<u>ls</u> )							
		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	<u>Cost to</u> <u>Complete</u>	Total Cost
(U) (U)	AF RDT&E Other APPN Aircraft Procurement, Air Force, BA-3	1,802	1,867	1,897	1,948	1,756	2,046	2,075	2,102	Continuing	TBD
	JPATS	222,822	204,011	280,569	289,491	312,344	280,312	196,964	3,013	6,400	2,372,700
` '	JPATS, BA-6	0	39,933	6,925	7,311	246	7,078	29,356	0	0	90,849
(U)	JPATS Mod Funding Military Construction, Air Force			4,201	3,867	4,719	5,753	13,395	11,710	26,320	69,965
, ,	PE 0804741F, JPATS RDT&E, Navy, BA-7	0	6,000	0	2,200	2,000	0	0	0	0	19,050
(U)	PE 0603208N, Training System Aircraft, H1150, JPATS Aircraft Procurement, Navy, BA-3	0	0	0	0	0	0	0	0	0	11,300
	JPATS	30,253	27,570	2,399	2,541	959	147,848	295,315	300,690	1,186,503	1,926,222
` /	APN 6 Spares	7,500	1,941	0	0	0	5,914	9,510	8,110	44,811	77,786
	Military Construction, Navy	4,100	2,000	0	11,000	13,900	0	6,200	0	0	46,900
	D. Acquisition Strategy JPATS was competitively awarded Program competitively awarded Incentive Firm Target (FPIF) m vehicle and GBTS is Firm Fixe	l two contrac anufacturing	cts: a Firm F g developmer	ixed Price Cont (MD)/prod	ontractor Log	sistics Suppor	rt (CLS) - Op	erations and	Maintenanc	e funds - contract and	a Fixed Price
( <b>U</b> )	E. Schedule Profile					FY 2002		<u>FY 2</u>	.003	FY 2	004
Pı	roject 4102				Page 4 of	11 Pages				Exhibit R-2A (PE	0604233F)

	RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)										DATE February 2003		
	GET ACTIVITY - System Development and Demonstration (SDD)		PE NUM	BER A	ND TITLE			gradu	ate Pilo	t Training	PRO	JECT	
05 ·	Milestone III TIMS Delivery to Randolph AFB Begin System-Level Multi-Service OT&E IOC Air Force (Moody AFB) Begin Deliveries to Laughlin AFB Complete System-level Multi-Service OT&E Durability & Damage Tolerance Testing Complete Start of Student Training Laughlin AFB Begin RM & A Verification IOC Navy (NAS Pensacola)	1 *	=	233F		1  * * *	FY 2		4 X X				
F	Project 4102	Pag	ge 5 of 11 I	• ages					Ex	hibit R-2A (I	PE 06042	233F)	

	RDT&E PROG	RAM ELE	MENT/P	ROJECT C	OST B	REAKDO	WN (R-3)		DATE <b>F</b> (	ebruary 2	2003
	GET ACTIVITY  System Developmen	t and Demo	nstration	(SDD)	-	er and title 33F Specia	alized Und	ergraduat	te Pilot Tı	aining	PROJECT <b>4102</b>
( <b>U</b> )	A. Project Cost Breakdown	(\$ in Thousan	ds)				EXZ	2002	EV 20	0.2	EN 2004
(U)	Aircraft Missionization/Test	and Evaluation					FY 2	<u>2002</u> 582	<u>FY 20</u> 1,81		<u>FY 2004</u> 1,697
(U)	Ground Based Training Syste							220	· · · · · · · · · · · · · · · · · · ·	i / i0	200
(U)	Other Government Costs (OC						1,	0		0	0
(U)	Total	30)					1.	802	1,86		1,897
(U)	B. Budget Acquisition Histo	ory and Plannir	ng Informatio	n (\$ in Thousan	ds)		,		,		,
(U)	Performing Organizations:	•			<del></del>						
(-)	Contractor or	Contract									
	Government	Method/Type	Award or	Performing	<b>Project</b>						
	Performing	or Funding	Obligation	Activity	Office	Total Prior	Budget	Budget	Budget	Budget to	<u>Total</u>
	Activity	Vehicle	Date	EAC	EAC	to FY 2002	FY 2002	FY 2003	FY 2004	Complete	<u>Program</u>
	Product Development Organi	zations									
	Raytheon Aircraft Company (RAC) */****	C/FPI	5 Feb 96	163,102	173,243	110,435	1,802	1,867	1,897	Continuing	TBD
	Flight Safety Services Corp.	N/A**	26 Sep 97	N/A	N/A	101,892	0	0	0	Continuing	TBD
	* RAC contract Total Program RAC EAC includes subcom ** Subcontract to RAC ****EACs based on GBTS O Support and Management Organic	tracted GBTS ender the contract of the contrac	ffort, which is	0. 0		Order (ECO), a	and Production	n Incentive			
	Various Test and Evaluation Organiza	Various ations	Various	N/A	N/A	44,210	0	0	0	Continuing	TBD
		<del></del>				Total Prior	Budget	Budget	Budget	Budget to	Total
	Subtotals					to FY 2002	FY 2002	FY 2003	FY 2004	Complete	
	Subtotal Product Developmen	nt				212,327	1,802	1,867	1,897	TBD	TBD
	Subtotal Support and Manage					44,210	0	0	0	TBD	TBD
	Subtotal Test and Evaluation										
	Total Project					256,537	1,802	1,867	1,897	TBD	TBD
Р	roject 4102			Pag	e 6 of 11 Pa	ges			Exhib	it R-3 (PE (	0604233F)

RDT&E BUDGET ITEM												
DGET ACTIVITY  5 - System Development and Demonstration (SDD)  PE NUMBER AND TITLE  0604233F Specialized Undergraduate								ite Pilot	Training	PROJECT <b>4376</b>		
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost		
4376 T-38 Avionics Upgrade Program (AUP)	2,880	0	1,370	1,420	1,449	1,490	1,528	1,566	Continuing	TBD		

#### (U) A. Mission Description

The T-38 Avionics Upgrade Program (AUP) is an integrated modernization of the T-38A and AT-38B cockpits to support mission-ready fighter training and converts all T-38A and AT-38B aircraft to T-38C configuration. The modernized digital cockpit will include Global Positioning System (GPS), Head-Up Display (HUD), Inertial Navigation System (INS), Multi-Function Displays (MFDs), Up-Front Control Panel (UFCP), Data Transfer System (DTS), No-Drop Bombing System (NDBS), and Hands-On Throttle and Stick (HOTAS) switchology. HUD symbology is the new USAF standard recently certified as a primary flight reference. Also included is the acquisition of two types of Aircrew Training Devices (ATDs) to replace the existing T-51 simulators. The program includes the design, integration, test, and installation of the cockpit prototype in aircraft, ATDs, and other training devices, as well as engineering services, studies, analysis and support to determine the feasibility of incorporating changes for purposes of making informed life-cycle cost business decisions. Additionally, funds were included in FY00 and FY01 for Phase I testing of engine operability/suitability for the T-38 Propulsion Modernization Program (PMP) and to update T-38 flight performance models, Technical Orders, and AUP software for changes brought about by the T-38 PMP. FY02 and FY04 - FY09 funding is for AUP block software updates driven by FAA-mandated changes; National Aerospace System (NAS) requirements such as Global Air Traffic Management (GATM), Joint Precision Approach and Landing System (JPALS), GPS, GPS Embedded Module (GEM) issues (Selective Availability Anti-Spoofing Module (SAASM), precision and GPS approaches); and/or enhancements identified during Development Testing, Operational Testing and Force Development Evaluation (FDE), and AETC operations such as scratch pad, improvements to UFCP, HUD, Built In Test (BIT), mechanization of menus/modes and mission planning/debriefing system, ATD HUD projectors, and Computer Aided Module (CAM) operations.

Budget Activity Justification. This project is in Budget Activity 5, Engineering and Manufacturing Development because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

### (U) FY 2002 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program

(U) \$2,762 Develop and test Block 3 T-38 AUP aircraft and ATD software for requirements driven by FAA/NAS mandates and/or improvements identified

during Test and Evaluation and AETC operations.

(U) \$118 Other Government Cost and Test

(U) \$2,880 Total

Project 4376 Page 7 of 11 Pages Exhibit R-2A (PE 0604233F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)  DATE February 2003												
	GET ACTIVITY	nt and Dam	on otrotic	n (CDD)		NUMBER ANI			araduata	Dilet Training	PROJECT	
	System Developme		ionstratio	טטא)	100	0U4Z33F \	Specialize	ea Unaer	graduate	Pilot Training	4376	
(U)	A. Mission Description C	<u>Continued</u>										
(U) (U) (U) (U)		complishments/P Activity as a res	_									
(U) (U) (U)	\$1,280 Dev	ing Test and Eva	ock 4 T-38C luation and A	AUP aircraft ETC operati		ftware for red	quirements di	riven by FAA	A/NAS manda	ates and/or improve	ments identified	
(U) (U)	\$90 Oth \$1,370 Tot	er Government ( al	Cost and Test									
( <b>U</b> )	B. Project Change Summ Not Applicable.	<u>iary</u>										
( <b>U</b> )	C. Other Program Fundi	ng Summary (\$	in Thousand	<u>ls)</u>								
		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to	Total Cost	
(U) (U)	AF RDT&E Other APPN	<u>Actual</u> 2,880	Estimate 0	<u>Estimate</u> 1,370	Estimate 1,420	Estimate 1,449	Estimate 1,490	Estimate 1,528	Estimate 1,566	<u>Complete</u> Continuing	TBD	
	PE 0804741F, T-38 Avion Upgrade, BP 1100	ics 76,759	95,193	72,251	53,976	37,309	28,085	39,166	14,449	0	549,442	
(U)	PE 0804741F, T-38 Avion Upgrade, Initial Spares, B 1600		973	0	0	0	0	0	0	0	6,283	
(U)	PE 0804741F, T-38 Propulsion Modification, E 1100	54,976 SP	63,524	59,926	60,468	64,831	67,641	117,786	74,670	269,633	846,561	
(U)	PE 0804741F, T-38 Propulsion Engine	5,763	7,106	6,556	4,812	5,123	5,226	8,147	8,294	13,656	63,367	
Р	roject 4376				Page 8 of	11 Pages				Exhibit R-2A (P	E 0604233F)	

	RDT&E BUDGET ITEM JUSTIFICA	TION SH	IEET (R-	2A Exhi	bit)		DATE <b>F</b> 6	ebruary	2003
•	GET ACTIVITY  System Development and Demonstration (SDD)		E NUMBER AN <b>604233F</b>		ed Underg	graduate	Pilot Tr	aining	PROJECT <b>4376</b>
(U)	C. Other Program Funding Summary (\$ in Thousands)  FY 2002 FY 2003 FY 2004  Actual Estimate Estimate  Modification, Initial Spares, BP 1600		FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate		ost to uplete	Total Cost
(U)	D. Acquisition Strategy The T-38 AUP competitively awarded three contracts to a single profixed price CLS contract for avionics including Contractor Owned a contract for the current and new Aircrew Training Devices (ATDs). ejector nozzle will be sole source additions to a current contract with be established on the existing Contractor Field Team (CFT) contract existing Boeing contract for the AUP. FY02 and FY04 - FY09 soft	nd Maintaine The T-38 Ph h General Ele t for kit instal	ed Base Suppl MP will be consectric, b) the in- lation; and d)	y (COMBS) (mprised of fonlet/former/buthe T-38 sof	(O&M funds) ur contractua ılkhead kits w tware change	; and c) a fi l efforts: a vill be a cont s required b	xed price av J85-5 engi npetitive aw	ward fee n ne modificard; c) a t	naintenance cation and ask order will
(U)	E. Schedule Profile								
ı		1	<u>FY 2002</u> 2 3	4 1	<u>FY 20</u> 2		4 1	FY 2	3 4
(U)	Required Assets Available (RAA), Moody AFB	1 *	2 3	4 1	. <u>2</u>	3 2	+ 1	2	3 4
(U)	Initiate Software Block 3 on AUP			*					
(U)	Required Assets Available (RAA), Columbus AFB				*				
(U)	Field Software Block 3					2	X		
(U) (U)	Required Assets Available (RAA), Vance AFB Initiate Sotware Block X on AUP						X	X	
(0)	* Denotes completed milestone							Λ	
ı	X Denotes planned milestone								
Р	roject 4376	Page 9 c	of 11 Pages				Exhibit	R-2A (PE	0604233F)

	RDT&E PROG	RAM ELE	MENT/P	ROJECT C	OST BI	REAKDO	WN (R-3)		DATE <b>F</b>	February 2003		
BUDO	GET ACTIVITY				-	ER AND TITLE	, ,				PROJECT	
05 -	System Developmen	t and Demo	nstration	(SDD)	060423	33F Specia	alized Und	ergraduat	e Pilot T	raining	4376	
(U)	A. Project Cost Breakdown	(\$ in Thousan	ds)									
	•		<del></del>				FY 2	2002	FY 20	003	FY 2004	
(U)	Other Government Costs and	test						118		0	90	
(U)	Block 3 Software Update						2,	762		0	1,280	
(U)	Total						2,	880		0	1,370	
(U)	B. Budget Acquisition History	ry and Plannin	g Informatio	n (\$ in Thousand	<u>ls</u> )							
(U)	Performing Organizations:											
	Contractor or	Contract										
	Government	Method/Type	Award or	Performing	<b>Project</b>							
	Performing	or Funding	Obligation	Activity	Office	Total Prior	Budget	<b>Budget</b>	Budget	Budget to	<u>Total</u>	
	Activity	Vehicle	Date	EAC	EAC	to FY 2002	FY 2002	FY 2003	FY 2004	Complete	Program	
	Product Development Organi	zations								-		
	The Boeing Corporation	C/CPAF	31 Jul 96	68,922	68,922	64,860	2,762	0	1,280	Continuing	TBD	
	St. Louis MO									C		
	ASC/YT WPAFB OH	Various	Annual	N/A	N/A	9,651	16	0	10	Continuing	TBD	
	GE, Lynn MA	CPFF	Jan 00	750	750	738	0	0	0	Õ	738	
	ASC/LP, WPAFB OH	Various	Annual	N/A	N/A	39	0	0	0	0	39	
	Support and Management Or	ganizations										
	OO-ALC/LCT Hill AFB UT	Various	Quarterly	N/A	N/A	194	0	0	0	Continuing	TBD	
	AETC Randolph AFB TX	Various	Quarterly	N/A	N/A	200	29	0	15	Continuing	TBD	
	OO-ALC/YWT Ogden AFB	Various	Quarterly	N/A	N/A	345	4	0	5	Continuing	TBD	
	UT											
	Test and Evaluation Organiza	tions										
	416 FLTS Edwards AFB CA	PO	Annual	N/A	N/A	3,382	69	0	60	Continuing	TBD	
	AFOTEC Kirtland AFB NM	PO	Annual	N/A	N/A	331	0	0	0	Continuing	TBD	
Р	roject 4376			Page	10 of 11 Pa	iges			Exhil	oit R-3 (PE (	0604233F)	

RDT&E PROGRAM ELEMENT/PROJECT	COST BREAKDO	WN (R-3)	)	DATE <b>F</b> e	ebruary 2	2003
BUDGET ACTIVITY	PE NUMBER AND TITLE			-		PROJECT
05 - System Development and Demonstration (SDD)	0604233F Specia	alized Und	ergraduat	e Pilot Tr	aining	4376
	<u>Total Prior</u>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>	Budget to	
Subtotals	to FY 2002	FY 2002	FY 2003	FY 2004	Complete	
Subtotal Product Development	75,288	2,778	0	1,290	TBD	TBD
Subtotal Support and Management	739	33	0	20	TBD	TBD
Subtotal Test and Evaluation	3,713	69	0	60	TBD	TBD
Total Project	79,740	2,880	0	1,370	TBD	TBD
Project 4376 P	Page 11 of 11 Pages			Exhib	it R-3 (PE (	0604233F)